

# FEBS LETTERS

*An international journal established for the most rapid possible publication of essentially final short papers in the field of Biochemistry, Biophysics and Molecular Biology*

Published by Elsevier Science Publishers B.V. (Biomedical Division) on behalf of the  
FEDERATION OF EUROPEAN BIOCHEMICAL SOCIETIES

A Federation of Biochemical Societies in Austria, Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, German Democratic Republic, Great Britain, Greece, Hungary, Iceland, Ireland, Israel, Italy, The Netherlands, Norway, Poland, Portugal, Rumania, Spain, Sweden, Switzerland, Turkey, USSR, Yugoslavia.

Editorial policy, subject coverage and submission procedures are described in *Notes to Authors* of this issue.

**Submitting authors:** Contributors are advised to submit their papers to the Editor who is closest to their field of interest, rather than geographically, to expedite more rapid reviewing.

## Editors:

G. SEMENZA (Managing Editor), Eidgenössische Technische Hochschule Zürich, Laboratorium für Biochemie, ETH-Zentrum, Universitätsstrasse 16, CH-8092 Zürich, Switzerland

S.P. DATTA (Honorary Chairman), London, England

H.R.V. ARNSTEIN (Reviews Editor), Department of Biochemistry, King's College, Strand, London WC2R 2LS, England

E. BOCK, The Protein Laboratory, University of Copenhagen, 34 Sigurdsgade, DK-2299 Copenhagen N, Denmark

J.E. CELIS, Department of Medical Biochemistry, Ole Worms Allé, Building 170, University Park, Aarhus University, DK-8000 Aarhus, Denmark

F. CHAPEVILLE, Institut Jacques Monod, Université Paris VII — Tour 43, 2, place Jussieu, 75251 Paris Cédex 05, France

P.L. DUTTON, Department of Biochemistry and Biophysics, School of Medicine G3, University of Pennsylvania, Philadelphia, PA 19174, USA

J. HANOUE, Unité de Recherches, INSERM U-99, Hôpital Henri Mondor, 94010 Créteil, France

H. HOLZER, Biochemisches Institut der Universität, Hermann-Herder-Str. 7, D-7800 Freiburg i.Br., FRG

L.N. JOHNSON, Laboratory of Molecular Biophysics, University of Oxford, Department of Zoology, Rex Richards Building, South Parks Road, Oxford OX1 3QU, England

A. KOTYK, Institute of Physiology, Czechoslovak Academy of Sciences, KRC, Vídeňská 1083, 142 20 Praha 4, Czechoslovakia

A.D. MIRZABEKOV, Institute of Molecular Biology, Academy of Sciences of the USSR, Vavilov str. 32, 117984 Moscow B-334, USSR

Y. NISHIZUKA, Department of Biochemistry, Kobe University School of Medicine, Chuo-ku, Kobe 650, Japan

M.J. OWEN, Laboratory of Lymphocyte Molecular Biology, St. Bartholomew's Hospital, Dominion House, Bartholomew Close, London EC1A 7BE, England

P.J. RANDLE, Nuffield Department of Clinical Biochemistry, John Radcliffe Hospital, Oxford OX3 9DU, England

T.A. RAPOPORT, Zentralinst. Molekularbiologie, Akademie der Wissenschaften der DDR, DDR-1115 Berlin-Buch, GDR

G.C.K. ROBERTS, Department of Biochemistry, University of Leicester, University Road, Leicester LE1 7RH, England

M.L. SALAS, Centro de Biología Molecular, Universidad Autónoma, Facultad de Ciencias, Canto Blanco, 28049 Madrid, Spain

M. SARASTE, Department of Medical Chemistry, University of Helsinki, Siltavuorenpenger 10, SF 00170 Helsinki, Finland

R. SATO, Osaka University, Institute for Protein Research, 3-2 Yamadoka, Suita, Osaka 565, Japan

N. SHARON, Department of Biophysics, Weizmann Institute of Science, P.O. Box 26, Rehovot 76100, Israel

V.P. SKULACHEV, A.N. Belozersky Laboratory of Molecular Biology and Bioorganic Chemistry, Moscow State University, 119899 Moscow, USSR

A. TREBST, Lehrstuhl für Biochemie der Pflanzen, Ruhr-Universität Bochum, Postfach 10 21 48, 4630 Bochum 1, FRG

I.M. VERMA, The Salk Institute, P.O. Box 85800, San Diego, CA 92138-9216, USA

B. WITKOP, NIADDK, Building 8- B1A-11, National Institutes of Health, Bethesda, MD 20892, USA

**Subscription information:** The institutional subscription price for 1988, volumes 225–240 (16 volumes in 32 issues) is f 3536.00 (US\$ 1911.25) including postage, packaging and handling.

**Personal subscriptions:** FEBS members can order a personal subscription at the reduced rate of f 1325.00 (US\$ 716.25) for 1988, including postage and handling. Members of the American Society of Biological Chemists and the Japanese Biochemical Society may order a personal subscription at the reduced rate of f 1830 (US\$ 989.25), including postage and handling. The following rules apply: (1) the subscriptions must be prepaid; (2) the order must be sent directly to the Publisher; (3) the copies should not be made available to institutions and laboratories. The Dutch guilders price is definitive. The US\$ price is subject to exchange rate fluctuations and is only given as a guide. Journals are sent by surface delivery to all countries, except the following where Surface Airlifted Mail is ensured: USA, Canada, Japan, Australia, New Zealand, P.R. China, India, Israel, South Africa, Malaysia, Singapore, South Korea, Taiwan, Pakistan, Hong Kong, Brazil, Argentina, Mexico and Thailand. Airmail rates for other countries are available on request.

**Subscription orders** can only be entered by calendar year (January to December) and should be sent to: Elsevier Science Publishers, Journals Department, P.O. Box 211, 1000 AE Amsterdam, The Netherlands; telephone (020) 5803911, telex 18582 ESPA NL; or your usual subscription agent. Claims for missing issues should be made within three months of publication, otherwise they cannot be honoured free of charge. The Publishers reserve the right to issue additional volumes during the course of the year. Such volumes will be invoiced before publication and delivered on receipt of payment. In the United States and Canada: For further information concerning this or any other Elsevier Science Publishers journal, contact Elsevier Science Publishers, Journal Information Center, 52 Vanderbilt Avenue, New York, NY 10017, USA; telephone (212) 370 5520.

Published fortnightly.

Printed in The Netherlands.

Elsevier Science Publishers B.V., P.O. Box 211, 1000 AE Amsterdam, The Netherlands